

AMENDMENTS TO THE SPECIFICATION

Please replace the paragraph on page 4, beginning with line 12 through page 5, line 3, with the following paragraph:

The record power of the three values is also used ~~also~~ when recording on a phase change type rewritable recording medium such as a rewritable compact disc (CD-RW). By repeatedly irradiating the P3 level light-emitting power laser light and the P1 level light-emitting power laser light at a high speed, the laser irradiated part on a recording surface is changed to an amorphous state. Then, the portion of the amorphous state is crystallized by continuously irradiating the P2 level light-emitting power laser light so that the crystallized portion represents information. The P2 level power and the P3 level power are determined, when writing information on an optical disc such as, for example, a CD-R/RW, by carrying out an optical power calibration of a recording laser power in a power calibration area (PCA) provided in an innermost portion of an optical disc before recording information.

Please replace the paragraph on page 5, beginning with line 4 through line 22, with the following paragraph:

However, the apparent laser power ~~changes~~ can change due to a change in a writing area of an optical disc, a temperature change with passage of time or a surface deflection and an eccentricity of an optical disc. Therefore, even if a recording starts at an ~~optimum~~ optimal power determined by the PCA, it will be no longer ~~optimum~~ optimal when ~~reached~~ it reaches a recording surface. Then, in the above-mentioned information recording apparatus, a laser power optimization method referred to as a running OPC method is carried out while recording information. In the running OPC method, the laser light reflected by the optical disc under a writing operation is

sampled at a timing to emit a light at a high power to form a pit. Then, the sampled signal is monitored so as to be compared with a monitor signal similar to that when the OPC is carried out, and the power of the emitted laser is controlled ~~so as~~ to always be optimized so that the sampled signal and the monitored signal are at the same level.

Please replace the paragraph on page 6, beginning with line 21 through line 25, with the following paragraph:

A more ~~More~~ specific object of the present invention is to provide an information recording apparatus which controls a recording power to be always ~~optimum~~ optimal without using a high-rate sampling circuit even when a recording condition is changed.

Please replace the paragraph on page 12, beginning with line 10 through line 12, with the following paragraph:

FIG. 5 is a graph showing another current versus record power ~~characteristics~~ characteristic of the laser diode shown in FIG. 1.

Please replace the paragraph on page 17, beginning with line 4 through line 17, with the following paragraph:

Then, the low-pass filter 7 ~~and/or~~ and/or the S/H circuit 8 detects the signal level value of the laser light of the laser diode 3 reflected by the optical disc 20 after starting ~~recording~~ to record information on the optical disc 20. The CPU 13 compares the detected signal level value with the reference value retained by the RAM 15, and ~~obtain~~ obtains an optimum laser power drive current by computing so as to equalize

the detected signal level value to the reference level value in accordance with a predetermined computation program stored in the ROM 14. The CPU 13 sets the drive current value with respect to the laser control circuit 11, and the laser control circuit 11 causes the laser diode 3 to emit a light based on the drive current value set by the CPU 13.

Please replace the paragraph on page 20, beginning with line 23 through page 21, line 15, with the following paragraph:

In a recordable type optical disc such as a CD-R, it is well known that ~~[[a]]~~ the recording power needed when forming pits corresponding to the same information and a width of an optical pulse ~~are~~ is different ~~between a case in which~~ when the optical disc uses a cyanine base colorant and ~~a case in which~~ when the optical disc uses a phthalocyanine base colorant. Furthermore, a change in the reflected light output is increased when the recording power is increased, which results in a decrease in the recording pulse width for forming pits on the optical disc. In such a case, the width of the ROPCsample pulse is also reduced. Therefore, unless the accuracy of the sample hold circuit is high, accurate detection cannot be performed and the running OPC cannot be performed appropriately. However, by detecting an average value by the low-pass filter, an accurate running OPC can be performed without using a highly accurate sample hold circuit.

Please replace the paragraph on page 21, beginning with line 16 through page 22, line 1, with the following paragraph:

The optical disc apparatus of the present embodiment can also be incorporated into an information processing ~~apparatuses~~ apparatus such as a personal

computer. Moreover, the present invention is also applicable to an optical amount control device for adjusting a light-emitting power of a light source such as a laser diode. Furthermore, in the above-mentioned process, although the case of the two values and three values as the optical amount level are explained, the drive current can also be adjusted based on the optical amount level values of other kinds.

Please replace the paragraph on page 22, beginning with line 2 through line 8, with the following paragraph:

As mentioned above, in the present embodiment, since the monitor by sampling and the monitor by average value are changed according to the recording speed without using a high-rate sampling circuit, a high-rate modulation can be performed, and the light source can be controlled to an ~~optimum~~ optimal light-emitting power in either a low-speed recording or a high-speed recording.